



# GREEN PLUMBING DESIGN™

## CANDIDATE BULLETIN



## PROGRAM OVERVIEW

*The Green Plumbing Design (GPD) certificate program, sponsored by the American Society of Plumbing Engineers and the International Association of Plumbing and Mechanical Officials, is for engineers and designers with advanced skills in sustainable plumbing system design and consulting. Available only for engineers and designers who hold either the Certified in Plumbing Design (CPD) certification or a Professional Engineer (PE) license, the GPD certificate denotes professionals with a high level of experience and training in sustainable practices. The GPD designation signifies professionals who are dedicated to ensuring the efficient use of our precious water resources via water-conserving plumbing system designs for commercial and residential applications.*



## >> SECTION ONE

### ELIGIBILITY REQUIREMENTS

This certificate program is available only for engineers and designers who hold either the Certified in Plumbing Design (CPD) certification or a Professional Engineer (PE) license.

### PROGRAM SCOPE

A green plumbing design candidate is a qualified individual who can demonstrate knowledge within their scope and will be proficient in efficient solar heated water design and installation, water efficient technology measures, and plumbing conservation measures.

### LEARNING OBJECTIVES

Upon completion of the course the Candidate will have mastery of and be assessed according to the following learning objectives:

#### **Determine Water Conservation Measures**

- Determine standards of water quality.
- Compile information on water consumption methods
  - Metering
- Select potable water efficient products

#### **Develop and Advise on Plumbing Conservation Measures - This unit is designed to develop skills in effectively reducing the impacts of plumbing services.**

- Holistic design of water heating and distribution system
  - Relate energy star ratings to gas and electric appliances
- Compile energy conversion information

#### **Identify and Advise on Efficient Solar Heated Water Design and Installation**

- The recent history of solar heated water (solar thermal) design.
- Identify the requirements of solar water heaters site considerations.
- Determine and install efficient solar water heating systems.
- Provide advice on solar hot water financial support programs and regulations.
- Identify Code Provisions

#### **Develop Water Efficient Technology Measures**

- Identify alternative water sources for urban re-use
- Outline rainwater harvesting and re-use.
  - Systems and equipment
  - Commercial applications
  - Code Provisions
- Provide advice on graywater use
  - Design Elements
  - Typical Devices
  - Code Provisions
- Provide advice on HVAC recovery (condensate)
- Identify on-site urban waste water treatment systems
- Compile information on water treatment products
- Provide comprehensive advice to customers on water treatment product selection

## Inspection Report Services

- Prepare for a domestic plumbing inspection report
  - Plan the outline of the inspection report (audit) process
  - Review tools or supplies necessary to undertake audit
  - Develop inspection checklists to reflect the scope and objectives of the inspection report
  - Confirm schedules and logistical arrangements with the customer
  - Determine water, sewer and energy (natural gas, electric, LP or fuel oil) rates in the area
  - Determine utility or governmental rebates available in the area
- Undertake a commercial or domestic plumbing inspection report
  - Describe the auditing process by completing the scope and objectives of an inspection report.
- Perform Calculations
  - Review audit methods and techniques in order to analyze relevant information
  - Report existing customer habits, trends and patterns of water and energy use and identify areas outside the normal patterns of usage
  - Apply the principles of calculations and utility costs of water and energy
  - Calculate the potential water and energy volume and dollar savings in a household
- Develop product knowledge and recommendations
  - Illustrate knowledge of water and energy efficient plumbing products
  - Compose a systematic list of recommendations for domestic home improvements
  - Recommend an appropriate energy or water cost efficient strategy to the client.

## >> SECTION TWO

### ABOUT ASPE

The American Society of Plumbing Engineers (ASPE) is the international organization for professionals skilled in the design, specification and inspection of plumbing systems. ASPE is dedicated to the advancement of the science of plumbing engineering, to the professional growth and advancement of its members and the health, welfare and safety of the public.

### ABOUT IAPMO

The International Association of Plumbing and Mechanical Officials (IAPMO) is a third-party provider of certification services to the piping industry. IAPMO tests and certifies personnel in the Plumbing, Piping, HVACR and related piping Industries. IAPMO also specializes in Test Development and Test Administration and offers a large number of personnel certifications that include but are not limited to Journey and Mastery Levels, IAPMO Voluntary Plumbing and Mechanical Inspector, and assorted City, County and State Government requirements. IAPMO is non-discriminatory in accepting applications and issuing certifications to candidates without regard to membership in any trade, association, union, etc. IAPMO is in compliance with Federal and State ADA regulations.

### FEES AND APPLICATION PROCEDURES

Registration will be handled on [aspe.org/GPD](http://aspe.org/GPD) and will close approximately two weeks prior to the workshop and exam.

The fees for the workshop and exam are \$500 for ASPE or IAPMO members, \$600 for nonmembers.

### ABOUT THE EXAM

The Green Plumbing Design Examination consists of 50 multiple-choice questions and is an open-note exam. The specifications for the examination were developed to assess the mastery of the learning objectives presented during the course.

### REFUNDS

All examination cancellations and requests for refunds must be made in writing to the GPD Program (the address can be found on the inside of the back bulletin cover). A registration, processing and administration fee, as specified on the registration form will be deducted from the examination fee prior to the issuing of the refund.

## >> SECTION THREE

### **SUCCESSFUL COMPLETION**

Results will be made available within 6-8 weeks to the participant. An official letter will be sent by ASPE informing you of the results of your assessment. A minimum score of 75% is required to pass the assessment.

### **REFRESHER COURSE**

Due to the changing nature of the green/sustainability industry the materials presented during the initial GPD workshop eventually become outdated as the environment and technology change. GPD designees are required to take a brief online refresher course every two years. The content will update designees on trends, technology, and code changes. The time spent during the refresher course will provide continuing education units that can be used toward recertification of their CPD certification or PE license(s). Designees will be provided with clear instructions on how to access the refresher course, and it must be completed within 30 days from their biennial anniversary date.

### **QUESTION CHALLENGE PROCEDURE**

Any candidate may challenge, at the conclusion of the assessment, any question(s) by completing the question challenge form that is provided in the proctor's examination package. Candidates must request the question challenge form from the proctor.

### **SPECIAL REQUESTS**

Candidates that have a disability that restricts their ability to participate under the standard conditions may request special arrangements. Such requests must accompany the application, and must be received by the normal application closing date. The request should indicate the nature of the disability and the special accommodations needed. Verification of both the disability and the need for special accommodations by a licensed medical professional may be required.

### **APPEALS PROCEDURE**

Candidates may appeal the score of an assessment. Appeals shall be filed in writing to the ASPE office no later than thirty (30) days from the date candidate receives the score. Appellants will be notified in writing of the decision by the certification committee.

If candidates do not achieve a passing score on the exam the candidate must participate in the course and sit for the exam again pending their application and eligibility is still valid. There is a \$275 fee to retake the GPD exam, made payable to ASPE.

### **ISSUANCE OF WALL CERTIFICATES**

Upon successful completion of the assessment an official letter and certificate from ASPE will be issued.